

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently Amended) A compound comprising:

a polymeric chain; and

an acid labile dissolution inhibitor group attached to the polymeric chain at an anhydride linkage.
2. (Currently Amended) The compound of claim 1, wherein the anhydride linkage comprises two acyl groups bonded to an oxygen atom, wherein a first of the two acyl groups is attached to the polymeric chain, and wherein a second of the two acyl groups is attached to the acid labile dissolution inhibitor group.
3. (Original) The compound of claim 2, wherein at least one of the acyl groups comprises a carbonyl group.
4. (Currently Amended) The compound of claim 1, wherein the anhydride linkage comprises two carbonyl groups bonded to an oxygen atom, wherein a first of the two carbonyl groups is attached to the polymeric chain, and wherein a second of the two carbonyl groups is attached to the acid labile dissolution inhibitor group.
5. (Original) The compound of claim 1, wherein the anhydride linkage comprises sulfur.
6. (Original) The compound of claim 5, wherein the anhydride linkage comprises a sulfonic acyl group.

7. (Original) The compound of claim 5, wherein the anhydride linkage comprises a sulfinic acyl group.
8. (Original) The compound of claim 5, wherein the anhydride linkage comprises two acyl groups bonded to a sulfur atom.
9. (Original) The compound of claim 1, wherein the anhydride linkage comprises phosphorous.
10. (Original) The compound of claim 9, wherein the anhydride linkage comprises a phosphoryl acyl group.
11. (Currently Amended) The compound of claim 1, wherein the acid labile dissolution inhibitor group comprises an alicyclic group.
12. (Original) The compound of claim 11, wherein the alicyclic group comprises a ring selected from an alkylated monocyclic ring and an alkylated polycyclic ring.
13. (Original) The compound of claim 12, wherein the alicyclic group comprises a group selected from methyl cyclopentyl, methyl cyclohexyl, methyl adamantyl, and norbornyl.
14. (Original) A composition comprising:

the compound of claim 1; and

a radiation sensitive acid generator capable of generating an acid if exposed to radiation.

15. (Original) A method comprising:
- forming a layer of the composition of claim 14 over a substrate;
- exposing the layer to patterned radiation;
- heating the exposed layer; and
- developing the exposed layer.
16. (Original) A compound comprising:
- a polymeric chain;
- a dissolution inhibitor attached to the polymeric chain at an anhydride linkage.
17. (Original) The compound of claim 16, wherein the anhydride linkage comprises two acyl groups bonded to an oxygen atom, wherein a first of the two acyl groups is attached to the polymeric chain, and wherein a second of the two acyl groups is attached to the dissolution inhibitor.
18. (Original) The compound of claim 16, wherein the anhydride linkage comprises sulfur.
19. (Original) The compound of claim 16, wherein the anhydride linkage comprises phosphorous.
20. (Original) A composition comprising on a solvent-dry basis:
- from 80 to 99.9 weight percent of the compound of claim 16; and
- from 0.1 to 20 weight percent of a photoacid generator.

Claims 21-30 (Cancelled)

31. (New) A method comprising:

forming a layer of the composition of claim 20 over a substrate;

exposing the layer to patterned radiation;

heating the exposed layer; and

developing the exposed layer.